CLAIMS

[1] A soft magnetic material used to make powder magnetic cores comprising:

a plurality of composite magnetic particles (30) formed from a metal magnetic particle (10) and an insulative coating (20) surrounding a surface of said metal magnetic particle (10) and containing metallic salt phosphate and/or oxide; and

a lubricant formed as fine particles added at a proportion of at least 0.001 percent by mass and no more than 0.1 percent by mass relative to said plurality of composite magnetic particles (30).

[2] A soft magnetic material according to claim 1 wherein said lubricant formed as fine particles has a mean particle diameter of no more than 2.0 microns.

[3] A soft magnetic material according to claim 1 wherein said lubricant formed as fine particles includes a metallic soap and/or an inorganic lubricant with a hexagonal crystal structure.

[4] A soft magnetic material according to claim 1 wherein a proportion of said lubricant formed as fine particles relative to said plurality of composite magnetic particles (30) is at least 0.001 percent by mass and no more than 0.025 percent by mass.

[5] A soft magnetic material according to claim 1 further comprising a thermoplastic resin interposed between said plurality of composite magnetic particles (30) at a proportion of at least 0.001 percent by mass and no more

than 0.1 percent by mass relative to said plurality of composite magnetic particles (30).

[6] A powder magnetic core made using a soft magnetic material according to claim 1.

[7] A powder magnetic core according to claim 6 wherein a fill rate (density) is at least 95 percent.